

ABSTRACT

A digital camera that automatically corrects dust artifact regions within acquired images by compiling a statistical dust map from multiple images acquired under different image acquisition conditions includes an optical system for acquiring an image including a lens assembly and an aperture stop. An electronic sensor array is disposed approximately at an image focal plane of the optical system for collecting image data according to spectral information associated with multiple pixels that collectively correspond to the image. Digital processing electronics include a processor for converting the image data to digital data and processing the digital data according to programming instructions. A memory has programming instructions stored therein for performing a method of automatic image correction of dust defect regions.